CLAIMS

1. A compound for vaccination of an animal comprising (i) a moiety which selectively binds to a dendritic cell in the animal but which moiety does not naturally occur in the animal and (ii) an antigen.

2. A compound according to Claim 1 wherein the moiety selectively binds to a pattern recognition receptor on a dendritic cell.

3. A compound according to Claim 2 wherein the pattern recognition receptor is DC-SIGN.

4. A compound according to Claims 1 or 2 wherein the moiety which selectively binds is a protein.

5. A compound according to Claim 4 wherein the moiety which selectively binds is any one of HIV gp120, the LAM protein of *Mycobacterium tuberculosis* or a glycoprotein of Ebola virus, or parts thereof.

6. A compound for vaccination of an animal comprising (i) a moiety selected from any of HIV gp120, the LAM protein of *Mycobacterium tuberculosis* or a glycoprotein of Ebola virus, or parts thereof, and (ii) an antigen.

7. A compound according to any one of the preceding claims wherein the antigen is a polypeptide.

8. A compound according to any one of the preceding claims wherein the antigen is a molecule associated with a disease of the animal or part or variant of such a molecule.

9. A compound according to any one of the preceding claims wherein the antigen comprises two or more molecules associated with a disease of the animal or parts or variants of such molecules.

10. A compound according to Claims 8 or 9 wherein the antigen is an antigenic component of a pathogen or a tumour or an antigenic part or variant of such a component.

11. A compound according to Claim 10 wherein the pathogen is any of a bacterium, virus, fungus, protozoa or helminth.

12. A compound according to Claim 11 wherein the antigen is an antigenic component of a pathogen selected from pathogens associated with OIE list A diseases, or a part or variant of such a component.

13. A compound according to any one of the preceding claims wherein the moiety and the antigen are covalently linked.

14. A compound according to any one of the preceding claims wherein the moiety which selectively binds, and the antigen, each comprise a polypeptide and both are present in the same polypeptide chain.

15. A nucleic acid molecule encoding a compound according to Claim 14.

16. An expression vector comprising a nucleic acid molecule according to Claim 15.

17. A host cell comprising a nucleic acid molecule according to Claim 15 or an expression vector according to Claim 16.

18. A vaccine comprising a compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15.

19. A vaccine according to Claim 18 further comprising an adjuvant.

20. A compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15 for use in medicine.

21. A pharmaceutical composition comprising a compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15 and a pharmaceutically acceptable carrier.

22. A method of immunising an animal against a disease comprising the step of administering to the animal a compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15.

23. A method of combating a disease in an animal comprising the step of administering to the animal a compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15.

24. The method according to any one of Claims 22 or 23 wherein the disease is one caused by a pathogen.

25. The method according to Claim 24 wherein the pathogen is any of a bacterium, virus, fungus, protozoa or helminth.

26. The method according to Claim 25 wherein the pathogen is one associated with OIE List A diseases.

27. The method according to any one of Claim 22 or 23 wherein the animal is a mammal.

28. The method according to any one of Claims 22 to 27 wherein the animal is a companion animal or farm animal.

29. The method according to any one of Claims 27 or 28 wherein the animal is a cow, sheep, horse, pig, goat, dog, cat or rabbit.

30. Use of a compound according to any one of Claims 1 to 14 or a nucleic acid according to Claim 15 in the manufacture of a medicament for combating a disease in an animal.

31. Use of a compound according to any one of Claims 1 to 14 or a nucleic acid according to Claim 15 in the manufacture of a vaccine for immunising an animal.

32. Use according to Claims 30 or 31 wherein the disease is one caused by a pathogen.

33. Use according to Claim 32 wherein the pathogen is any of a bacterium, virus, fungus, protozoa or helminth.

34. Use according to Claim 33 wherein the pathogen is one associated with OIE List A diseases.

35. Use according to Claims 30 or 31 wherein the animal is a mammal.

36. Use according to Claims 30 or 31 wherein the animal is a companion animal or farm animal.

37. Use according to Claims 35 or 36 wherein the animal is a cow, sheep, horse, pig, goat, dog, cat or rabbit.

38. A method of making a compound according to Claim 1 or 6 comprising linking the said moiety and the said antigen.

39. A method of making a compound according to Claim 14 which comprises a polypeptide, said method comprising (i) culturing host cell according to Claim 17 which expresses said polypeptide and (ii) isolating said polypeptide.

40. A method of making a nucleic acid according to Claim 15 comprising linking a nucleic acid molecule which encodes a moiety which selectively binds to a dendritic cell and a nucleic acid molecule which encodes an antigen.

41. A nucleic acid molecule comprising (i) a portion which encodes a moiety which selectively binds to a dendritic cell and (ii) an insertion point for insertion of a polynucleotide encoding an antigen wherein when said polynucleotide is inserted into said insertion point, said nucleic acid molecule encodes a compound according to Claim 14.

42. The nucleic acid according to Claim 41 wherein said nucleic acid encodes a moiety which selectively binds to a pattern recognition receptor on a dendritic cell.

43. The nucleic acid according to Claim 42 wherein the recognition receptor is DC-SIGN.

44. The nucleic acid according to Claims 41 or 42 wherein the moiety which selectively binds is any one of HIV gp120, the LAM protein of *Mycobacterium tuberculosis* or a glycoprotein of Ebola virus.

45. A method of determining whether an animal has been administered a compound according to Claim 1, the method comprising determining whether the animal has had an immune response to said moiety which selectively binds to a dendritic cell.

46. A method according to Claim 45 comprising the further step of determining whether the animal has had an immune response to the antigen present in said compound.

47. A kit of parts comprising (i) a compound according to any one of Claims 1 to 14 or a nucleic acid molecule according to Claim 15 and (ii) means for detecting an immune response to the moiety present in said compound which selectively binds to a dendritic cell, and/or (iii) means for detecting an immune response to the antigen present in said compound.

48. A kit of parts according to Claim 47 wherein if present part (ii) comprises all, or a portion of, said moiety which binds to an antibody raised against said moiety and part (iii) comprises all, or a portion, of said antigen which binds to an antibody raised against said antigen.

49. A kit of parts comprising (i) means for detecting an immune response to an animal disease antigen and (ii) means for detecting an immune response to a moiety which selectively binds to a dendritic cell.

50. A kit of parts according to any one of Claims 47 to 49 wherein the means for detecting an immune response is an ELISA.

51. Any novel method of vaccinating an animal wherein the so-vaccinated animal can be distinguished from a naturally infected animal as described herein.